

REMARKS

This paper is filed in response to the Office Action mailed November 3, 2009. This reply is timely filed with a *one-month Extension of Time* provided herewith. A *Request for Continued Examination* is also provided herewith. At the time of the Office Action, claims 1, 6-8 and 14 were pending in the application.

I. Status of the Claims

Claims 1, 6, 7 and 8 have been amended. No new subject matter has been added. Claim 15 has been added.

Claims 1, 6, 7, 8 and 14 have been rejected under 35 U.S.C. § 103. The rejections are set forth in more detail below.

II. Rejections under 35 U.S.C. § 103

A. Rejection of Claims 1 and 6

Claims 1 and 6 have been rejected under 35 U.S.C. § 103(a) as unpatentable over U.S. Patent Publication No. 2003/0054239 to Watanabe et al. ("Watanabe") in view of U.S. Pat. Publication No. 2004/0038124 to Hisamitsu et al. ("Hisamitsu"). Applicant respectfully traverses the Examiner's rejection.

Watanabe generally discloses an assembled battery comprising a plurality of unit cells **4**.¹ Each unit cell **4** comprises a cathode/anode terminal **4b** connected to cathode/anode sheets of a cell member **4a**.² However, Watanabe fails to disclose and/or suggest the high power lithium unit cell recited in amended independent claim 1. More particularly, Watanabe fails to disclose and/or suggest a unit cell comprising a cathode/anode terminal electrically connected to a plurality of cathode/anode plate connecting parts along substantially an entire exposed surface thereof.³ Watanabe also fails to disclose and/or suggest a unit cell comprising a plurality of cathode/anode plate connecting parts in direct electrical contact with each other along substantially entire surfaces

¹ See FIGS. 2A-2B of Watanabe.

² *Id.*

³ See page 7, line 25 through page 8, line 17 of the present application.

thereof.⁴ In this regard, it should be understood that Watanabe is silent as to the manner in which the cathode/anode terminal **4b** is connected to the cathode/anode sheets of a cell member **4a**.

Watanabe also fails to disclose and/or suggest a unit cell comprising a plurality of cathode/anode plate connecting parts each protruding from either of two long sides of four sides of a respective cathode/anode plate of the plurality of rectangular cathode/anode plates. Instead, Watanabe suggests a unit cell **4** comprising a plurality of cathode/anode plate connecting parts each protruding from a respective short side of a rectangular cathode/anode plate.⁵ This is an important distinction between the unit cell structure recited in amended independent claim 1 and the unit cell structure disclosed in Watanabe. In this regard, it should be understood that the unit cell of the present invention has a reduced internal resistance as compared to the conventional unit cell of Watanabe.⁶ This reduced internal resistance is at least partially due to the fact that the width of the cathode/anode terminal has been increased as compared to that of Watanabe.⁷

Hisamitsu generally discloses a cell package **3** comprising positive electrode plates **2A** connected to a positive terminal **5** and negative electrode plates **2B** connected to a negative terminal **7**.⁸ However, Hisamitsu fails to disclose and/or suggest the high power lithium unit cell recited in amended independent claim 1. More particularly, Hisamitsu fails to disclose and/or suggest a unit cell comprising a cathode/anode terminal electrically connected to a plurality of cathode/anode plate connecting parts along substantially an entire exposed surface thereof. Rather, Hisamitsu discloses and/or suggests a cathode/anode terminal **5, 7** electrically connected to a plurality of leads **4, 6** at first ends of two opposing ends thereof.⁹

Hisamitsu also fails to disclose and/or suggest a unit cell comprising a plurality of cathode/anode plate connecting parts in direct electrical contact with each other along substantially entire surfaces thereof. Rather, Hisamitsu discloses and/or suggests a unit cell **3** comprising a plurality of leads **5, 6** which are in direct electrical contact with each other along end portions

⁴ *Id.*

⁵ See FIGS. 2A-2B of Watanabe.

⁶ See page 9, lines 2-9 of the present application.

⁷ *Id.*

⁸ See FIG. 3 of Hisamitsu.

⁹ *Id.*

thereof. Notably, a substantial portion of the surfaces of the leads 5, 6 are spaced from each other as shown in FIG. 3 of Hisamitsu.

The above identified distinctions are important distinctions between the unit cell structure recited in amended independent claim 1 and the unit cell structure disclosed in Hisamitsu. In this regard, it should be understood that the unit cell of the present invention has a reduced internal resistance as compared to the conventional unit cell of Hisamitsu. This reduced internal resistance is at least partially due to the fact that each of the cathode and anode terminals are electrically connected to a plurality of respective cathode or anode plate connecting parts along substantially an entire exposed surface thereof. This reduced internal resistance is also at least partially due to the fact that the cathode/anode plate connecting parts are in direct electrical contact along substantially their entire surfaces.

Therefore, amended independent claim 1 is non-obvious in view of Watanabe, Hisamitsu and/or the suggested combination thereof. As such, amended independent claim 1 is now in condition for allowance. Dependant claim 6 is also allowable at least by virtue of its dependence on an allowable base claim 1.

B. Rejection of Claim 7 and 8

Claim 7 has been rejected under 35 U.S.C. § 103(a) as unpatentable over Watanabe in view of Hisamitsu, and further in view of U.S. Patent Publication No. 2004/0191632 to Kelley et al. ("Kelley"). Claims 7 and 8 have been rejected under 35 U.S.C. § 103(a) as unpatentable over Watanabe in view of Hisamitsu, and further in view of U.S. Patent No. 5,498,490 to Brodd ("Brodd"). Applicant respectfully traverses the rejection.

Claims 7 and 8 depend on amended independent claim 1. As noted above, Watanabe and Hisamitsu fail to disclose and/or suggest the high power lithium unit cell recited in amended independent claim 1. More particularly, Watanabe and Hisamitsu fail to disclose and/or suggest a unit cell comprising a cathode/anode terminal electrically connected to a plurality of cathode/anode plate connecting parts along substantially an entire exposed surface thereof. Watanabe and Hisamitsu also fail to disclose and/or suggest a unit cell comprising a plurality of cathode/anode

plate connecting parts in direct electrical contact with each other along substantially entire surfaces thereof.

The deficiencies of Watanabe and Hisamitsu are not corrected by Kelley and/or Brodd. For example, Kelley and/or Brodd generally disclose a unit cell including alternating positive/anode and negative/cathode layers.¹⁰ However, Kelley and Brodd disclose are silent as to the manner in which cathode/anode terminals are connected to the positive/anode layers and negative/cathode layers of the unit cell. As such, Kelley and/or Brodd fail to disclose and/or suggest a unit cell comprising a cathode/anode terminal electrically connected to a plurality of cathode/anode plate connecting parts along substantially an entire exposed surface thereof. Kelley and/or Brodd also fail to disclose and/or suggest a unit cell comprising a plurality of cathode/anode plate connecting parts in direct electrical contact with each other along substantially entire surfaces thereof.

Therefore, amended independent claim 1 is non-obvious in view of Watanabe, Hisamitsu, Brodd and/or the suggested combination thereof. As such, amended independent claim 1 is now in condition for allowance. Each of the dependant claims 7 and 8 is also allowable at least by virtue of its dependence on an allowable base claim 1.

C. Rejection of Claim 14

Claim 14 has been rejected under 35 U.S.C. § 103(a) as unpatentable over Watanabe in view of Hisamitsu and Brodd, and further in view of Japanese Patent Publication No. 2004-027124 to Miyazaki ("Miyazaki"). Applicant respectfully traverses the rejection.

Claim 14 depends on dependant claim 8. Claim 8 depends on amended independent claim 1. As noted above, Watanabe, Hisamitsu and Brodd fail to disclose and/or suggest the high power lithium unit cell recited in amended independent claim 1. More particularly, Watanabe, Hisamitsu and Brodd fail to disclose and/or suggest a unit cell comprising a cathode/anode terminal electrically connected to a plurality of cathode/anode plate connecting parts along substantially an entire exposed surface thereof. Watanabe, Hisamitsu and Brodd also fail to disclose and/or suggest a unit cell comprising a plurality of cathode/anode plate connecting parts in direct electrical contact with each other along substantially entire surfaces thereof.

¹⁰ See col. 3, lines 30-41 of Kelley and col. 1, lines 20-62 of Brodd.

The deficiencies of Watanabe, Hisamitsu and Brodd are not corrected by Miyazaki. For example, Miyazaki also fails to disclose and/or suggest a unit cell comprising a cathode/anode terminal electrically connected to a plurality of cathode/anode plate connecting parts along substantially an entire exposed surface thereof. Miyazaki also fails to disclose and/or suggest a unit cell comprising a plurality of cathode/anode plate connecting parts in direct electrical contact with each other along substantially entire surfaces thereof.

Therefore, amended independent claim 1 is non-obvious in view of Watanabe, Hisamitsu, Brodd, Miyazaki and/or the suggested combination thereof. As such, amended independent claim 1 is now in condition for allowance. Dependant claim 14 is also allowable at least by virtue of its dependence on an allowable base claim 1.

III. New Claim

New claim 15 distinguishes over the cited references based at least on the arguments above.

IV. Conclusion

The applicants' representative has made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition of allowance. Nevertheless, the applicants' representative invites the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. In view of the foregoing remarks, the applicants' representative respectfully requests reconsideration and prompt allowance of the pending claims. Please charge any deficiencies, or credit any overpayment, to Deposit Account No. 04-0100.

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